

Does Combining Data from the Laboratory with a DCE Improve Our Understanding of Decision-Making?

Emily Lancsar¹, Jemimah Ride², Zack Dorner³

¹Australian National University; ²University of Melbourne; ³University of Waikato

Background: There is growing interest in the possibilities offered by experimental economics to improve methods used in health economics. Here we study the application of methods from the experimental economics laboratory to health-related discrete choice experiments (DCEs). The hypothesis is that we can improve our understanding of participants' preferences by estimating novel, more comprehensive, preference models, now accounting for or making fewer assumptions about factors usually not captured in a DCE.

Methods: The setting for this study is a DCE examining preferences for programs designed to improve nutrition and/or physical activity. These lifestyle choices are highly relevant to the pervasive problem of obesity, and carry significant health impacts. The DCE examines preferences for type of program, cost, program goals, and financial incentives for achievement of weight loss goals. We use laboratory methods to measure respondents' time preferences, intrinsic motivation, and physical stature, incorporating each into the preference model. Using mixed logit estimation we compared a model with attributes and covariates to the same model with the addition of the variables from the laboratory. We test whether harnessing additional variables from the laboratory has any significant effect on our estimates of preference by examining the impact on model coefficients and on willingness-to-pay for program attributes.

Results and conclusions: Measures of time preference and physical stature are statistically significant explanatory variables in our model. Adding these to the model did not change preferences in relation to the attributes of the nutrition and exercise programs nor other covariates, improved the statistical properties of the models (AIC and BIC) and impacted the estimated willingness-to-pay for program attributes. We discuss policy insights, implications for DCE practice and methodological questions raised by these findings.